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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/581,362	06/02/2006	Peter Huntemann	291262US0PCT	3631
22850	7590	06/10/2009		
OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			EXAMINER WOOD, ELLEN S	
			ART UNIT 1794	PAPER NUMBER
			NOTIFICATION DATE 06/10/2009	DELIVERY MODE ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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<b>Office Action Summary</b>	<b>Application No.</b> 10/581,362	<b>Applicant(s)</b> HUNTEMANN ET AL.	
	<b>Examiner</b> ELLEN S. WOOD	<b>Art Unit</b> 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 30 March 2009.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 11-19 and 21-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 11-19 and 21-30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 03/30/2009 has been entered.

2. Applicant's arguments, filed 03/30/2009, with respect to claims 11-19 and 21-30 have been fully considered and are persuasive. The rejection under 35 U.S.C 103 (a) as being unpatentable over Bartz et al. (US 6,790,537, hereinafter "Bartz") in view of [www.crgpr.net/syntactics.shtml](http://www.crgpr.net/syntactics.shtml) has been withdrawn.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

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4. Claims 11-13, 15, 21, 22, 23, 25, 26, 27, 28, 29 and 30 are rejected under 35 U.S.C. 102(e) as being anticipated by Huntemann (US 6,955,778).

The applied reference has a common inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

In regards to claims 11-13, Huntemann discloses syntactic polyurethane that is usually used as insulating coatings, owing to their advantageous compressive strength and thermal resistance preferably in the offshore sector (col. 1 lines 10-15). The individual components include a polyisocyanate component (col. 3 lines 1-3), a polyol component that contains polyetherpolyols based on difunctional and/or trifunctional initiator molecule (col. 3 lines 44-67) and conventional chain extenders (col. 4 lines 13-15). The syntactic polyurethane is obtained by reacting the individual components in the presence of hollow microspheres (col. 2 lines 11-14). Polyetherpolyols having a functionality from 2 to 8, preferably from 2 to 6, have a molecular weight from 400-4000 (col. 3 lines 29-33). The polyetherpolyols have a functionality from 2 to 3 and molecular weights from 1000-8000, preferably from 2000-7000 (col. 3 lines 63-67). Although the prior art does not disclose the softening point and the viscosity the claimed properties are deemed to be inherent to the structure in the prior art since the Huntemann reference teaches an invention with a substantially similar structure and chemical

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composition as the claimed invention. Products of identical structure and composition cannot have mutually exclusive properties. The burden is on the Applicants to prove otherwise.

In regards to claim 15, Huntemann discloses a process for the preparation of syntactic polyurethanes by reacting the individual components including a polyisocyanate component (col. 3 lines 1-3), a polyol component that contains polyetherpolyols based on difunctional and/or trifunctional initiator molecule (col. 3 lines 44-67) and conventional chain extenders (col. 4 lines 13-15). The syntactic polyurethane is obtained by reacting the individual components in the presence of hollow microspheres (col. 2 lines 11-14). Polyetherpolyols having a functionality from 2 to 8, preferably from 2 to 6, have a molecular weight from 400-4000 (col. 3 lines 29-33). The polyetherpolyols have a functionality from 2 to 3 and molecular weights from 1000-8000, preferably from 2000-7000 (col. 3 lines 63-67). Although the prior art does not disclose the softening point and the viscosity the claimed properties are deemed to be inherent to the structure in the prior art since the Huntemann reference teaches an invention with a substantially similar structure and chemical composition as the claimed invention. Products of identical structure and composition cannot have mutually exclusive properties. The burden is on the Applicants to prove otherwise.

In regards to claims 21, Huntemann discloses that the hollow microspheres are organic hollow microspheres, mineral hollow microspheres or combinations (col. 2 lines 41-51).

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In regards to claims 22, Huntemann discloses that the organic hollow microspheres are hollow plastics spheres, for example of polyethylene, polypropylene, polyurethane, polystyrene or a mixture thereof (col. 2 lines 41-51).

In regards to claim 23, Huntemann discloses that the mineral hollow microspheres comprise clay, aluminum silicate, glass or a mixture thereof (col. 2 lines 41-51).

In regards to claim 25, Huntemann discloses that the hollow microspheres have a diameter of from 1 to 1000  $\mu\text{m}$  (col. 2 lines 41-51).

In regards to claims 26-27 and 29, although the prior art does not disclose the properties of the hollow microspheres as claimed by applicant, the claimed properties are deemed to be inherent to the structure in the prior art since the Huntemann reference teaches an invention with a substantially similar structure and chemical composition as the claimed invention. Products of identical structure and composition cannot have mutually exclusive properties. The burden is on the Applicants to prove otherwise.

In regards to claim 28, Huntemann discloses that hollow glass microspheres are preferred (col. 2 line 56).

In regards to claim 30, Huntemann discloses that the syntactic polyurethane has a content of hollow microspheres is from 1 to 80% by weight, base on the total weight of the syntactic polyurethane (claim 5).

***Claim Rejections - 35 USC § 103***

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5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 14, 16, 17, 18, 19 are rejected under 35 U.S.C. 103(a) as being obvious over Huntemann (US 6,955,778) in view of Ohm (US 6,000,438).

The applied reference has a common inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art only under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 103(a) might be overcome by: (1) a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not an invention "by another"; (2) a showing of a date of invention for the claimed subject matter of the application which corresponds to subject matter disclosed but not claimed in the reference, prior to the effective U.S. filing date of the reference under 37 CFR 1.131; or (3) an oath or declaration under 37 CFR 1.130 stating that the application and reference are currently owned by the same party and that the inventor named in the application is the prior inventor under 35 U.S.C. 104, together with a terminal disclaimer in accordance with 37 CFR 1.321(c). This rejection might also be overcome by showing that the reference is disqualified under 35 U.S.C. 103(c) as prior art in a rejection under 35 U.S.C. 103(a). See MPEP § 706.02(I)(1) and § 706.02(I)(2).

Huntemann is silent with regards to the method involved for forming offshore pipes.

Ohrn discloses a subsea pipeline or flow line with an improved thermal insulation construction with employs phase change materials in combination with other conventional insulation materials (col. 1 lines 5-11). The phase change material is considered the encapsulated latent heat stores, because the phase change material in micro-encapsulated (col. 2 lines 47-50) and because the latent heat can be used as a thermal energy storage for maintaining a warm or cool temperature in the region adjacent the phase change material (col. 2 lines 21-24). The phase change material can be used in conventional insulation materials such as syntactic polyurethane foams (col. 4 lines 46-52). The insulation layer has a thickness of 1-3 inches which falls within the claimed range of the applicant. The phase change materials have operating temperatures of between 22-143<sup>0</sup>F (col. 4 lines 26-31).

Ohrn discloses a process for the production of offshore pipes wherein insulation (18), preferably in the form of micro-encapsulated phase change material dispersed within conventional insulation material, fills an annular region between the inner carrier pipe (12) and the outer jacket pipe (14) (col. 3 lines 22-27 and fig. 3). Typically the insulation material is cast around a pipe joint (col. 3 lines 38-40).

It would be obvious to one of ordinary skill in the art to combine the phase change materials and the method of forming offshore pipes of Ohrn with the syntactic polyurethane insulation material of Huntemann. The addition of the phase change materials into the syntactic polyurethane would improve the insulation to prevent blockages from forming in the offshore pipes due to cooling during shut-in periods (col. 1 lines 9-12).



***Response to Arguments***

7. Applicant's arguments with respect to claims 11-19 and 20-30 have been considered but are moot in view of the new ground(s) of rejection.
8. Claim 20 has been canceled.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ELLEN S. WOOD whose telephone number is (571)270-3450. The examiner can normally be reached on M-F 730-5 with every other Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye can be reached on (571)272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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/Rena L. Dye/  
Supervisory Patent Examiner, Art Unit 1794